بِسْمِ اللهِ الرَّحْمٰنِ الرَّحِيْمِ

“An[illegible]e place specified for it” (Surah No. 36, Verse No. 38, Al-Qurãn)

“And that He subjected the sun and the moon, each one running its course with specified period”
(Surah No. 14, Verse No. 33, Al-Qurãn)

اللَّهُمَّ صَلِّ عَلَىٰ مُحَمَّدٍ وَعَلَىٰ آلِ مُحَمَّدٍ ❁ كَمَا صَلَّيْتَ عَلَىٰ إِبْرَاهِيْمَ وَعَلَىٰ آلِ إِبْرَاهِيْمَ إِنَّكَ حَمِيْدٌ مَجِيْدٌ ❁ اللَّهُمَّ بَارِكْ عَلَىٰ مُحَمَّدٍ وَعَلَىٰ آلِ مُحَمَّدٍ ❁ كَمَا بَارَكْتَ عَلَىٰ إِبْرَاهِيْمَ

This is video presentation of book titled

The Sun and the Stars are Set in Motion

New Model of Solar System

Legitimate Refutation of Heliocentric Model

By

Professor Abdul Razzaq

available at

https://www.amazon.com/SUN-STARS-ARE-SET-MOTION/dp/1694561348/ref=tmm_pap_swatch_0?_encoding=UTF8&qid=1632908839&sr=1-1

DEDICATION

THIS HUMBLE EFFORT IS DEDICATED TO QURÃN THAT HAS BEEN MADE EASY TO UNDERSTAND FOR GUIDANCE OF HUMANKIND BY THE CREATOR OF THIS UNIVERSE. INSPIRED BY QURÃN I PROBED INTO THE SKIES AND COMPLETED THIS MANUSCRIPT

ACKNOWLEDGEMENT

Thanks to my daughter Ayesha and son Ammar who realized the importance of this work and never distracted me during hours of profound concentration. They also contributed in this work by making two diagrams. I have no words to express my feelings for my parents who taught me the first word of Qurãn that moved me to probe into the skies. Allah bless them forever in heavens. Endless thanks to my wife who made me to wake at night and study the skies in peace.

Special thanks to my friend Nusrat Ali, Wing Commander (R) Pakistan Air Force who was always anxious for completion of this work and provided all kind of help as and when needed. Acknowledgement is also due to my colleagues who always encouraged and helped me for this work.

Prologue (last para)

Heliocentric [illegible] lenged and denied. In this book substantial evidences based on scientific principles, mathematical calculations, definite observations, logical and deductive reasoning have been presented that provide sufficient grounds for legitimate refutation of orbital revolution of the earth as perceived in heliocentric theory. A new comprehensive model, more scientific and mathematical in nature, is presented that perfectly fits with the most recent numerical values without any assumption. Mathematical, scientific and logical evidences provided in this book may be assessed critically for their legitimacy. Comparative judgment of the two models will explicitly manifest that the heliocentric model was an illusion without any scientific justification.

Prof. Dr. Abdul Razzaq

"The sun and the stars are set in motion"

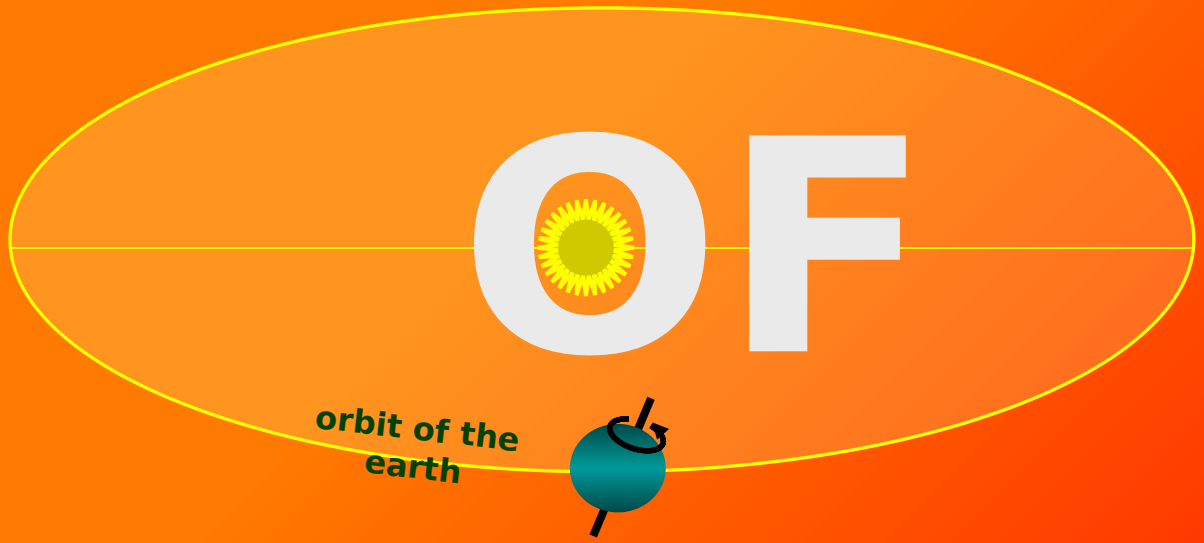
by Prof . Dr. Abdul Razzaq

New Model of SOLAR SYSTEM

LEGITIMATE REFUTATION OF HELIOCENTRIC MODEL

PART –I

MATHEMATICAL ASSESSMENT



HELIOCENTRIC MODEL

Please Note

- The diagrams presented here are not according to the scale but an attempt has been made to depict the real situation

Numerical values used for calculations are taken from IERS (International Earth Rotation and Reference System Service) and other authentic sources

CHAPTER – 1

Introduction

Notable Models Proposed

- Heraclides (330 BC) geocentric model
- Aristarchus (270 BC) heliocentric theory
- Ptolemy (Claudius Ptolemaeus, 127-145 AD)

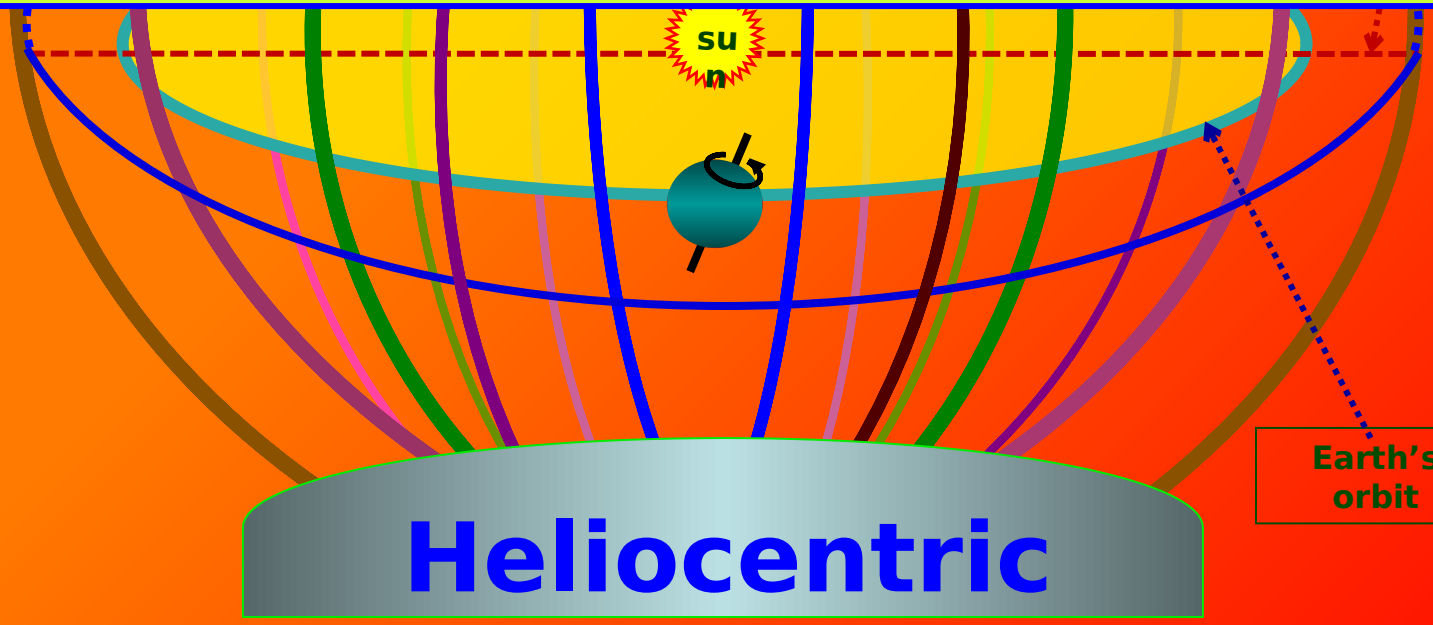
Geocentric Theory (Ptolemaic system)

- Nicolas Copernicus (1473-1543 AD)

Heliocentric theory: Postulates

Axis of the earth precesses clockwise. Axial precession causes the sun to rise in new constellation and is responsible for 1224.51s difference between sidereal year and tropical year

and relative to sun is 365.24219 d (31556925.25) sec



Heliocentric Model

Razzaq

Questions lacking mathematical and logical answers in heliocentric model

1- What is actual time taken by the earth to revolve 360° in the orbit? Whether sidereal year or tropical year?

2- What revolution period (tropical or sidereal) can justify generation of 24 hour day with 23.9345 hour rotation period of the earth?

3- The sun and the stars are assumed stationary but the earth meets the same star earlier during rotation and aligns with to the same star later than the sun during revolution in the orbit. Why?

4- Sidereal year is 1224.51 seconds (about 20 minutes) longer than tropical year. How is this difference created while the sun and stars relative to the earth are stationary?

5- Axial Precession (precession of equator) is considered responsible for 1224.51 seconds difference in tropical and sidereal years. How can axial precession create this difference? Does the earth fall in the orbit due to precession and takes more time to reach at its initial

Questions lacking mathematical and logical answers in heliocentric model

6- Circular displacement of observer on the earth causes a change in angle of view of the reference star but circular displacement of the earth in orbit does not change angle of view of the reference star. How is this possible?

7- Tilted axis of the earth always keeps pointing to the pole star throughout the orbital motion. How can this be proved geometrically and logically?

8- Meridians of tilted earth will not have same alignment to the radiation from the sun during autumnal/vernal equinoxes and summer/winter solstices. How is uniform time observed on meridians while the earth revolves in orbit with tilted axis?

9- Why apparent motion of the stars does not correspond with orbital motion of the earth? If the earth revolves in the orbit why the same constellation can be viewed at night in between the observer and the pole star for several months?

10- How celestial and terrestrial axes, equatorial

Questions lacking mathematical and logical answers in heliocentric model

11- How does the moon orbit the earth that itself orbits the sun? If the moon revolves around the earth due to gravitational pull then what force is responsible for dragging the moon along with the earth in the orbit?

12- When the moon is in between the sun and the earth what is the net gravitational force applied on the moon? What will be the fate of the moon under two different gravitational forces in opposite directions?

13- Altitude and velocity is calculated to put a satellite in orbit with certain period without any consideration to orbital motion of the earth. Why? What force keeps the satellite linked with the earth throughout the orbital motion of the earth?

CHAPTER – 2

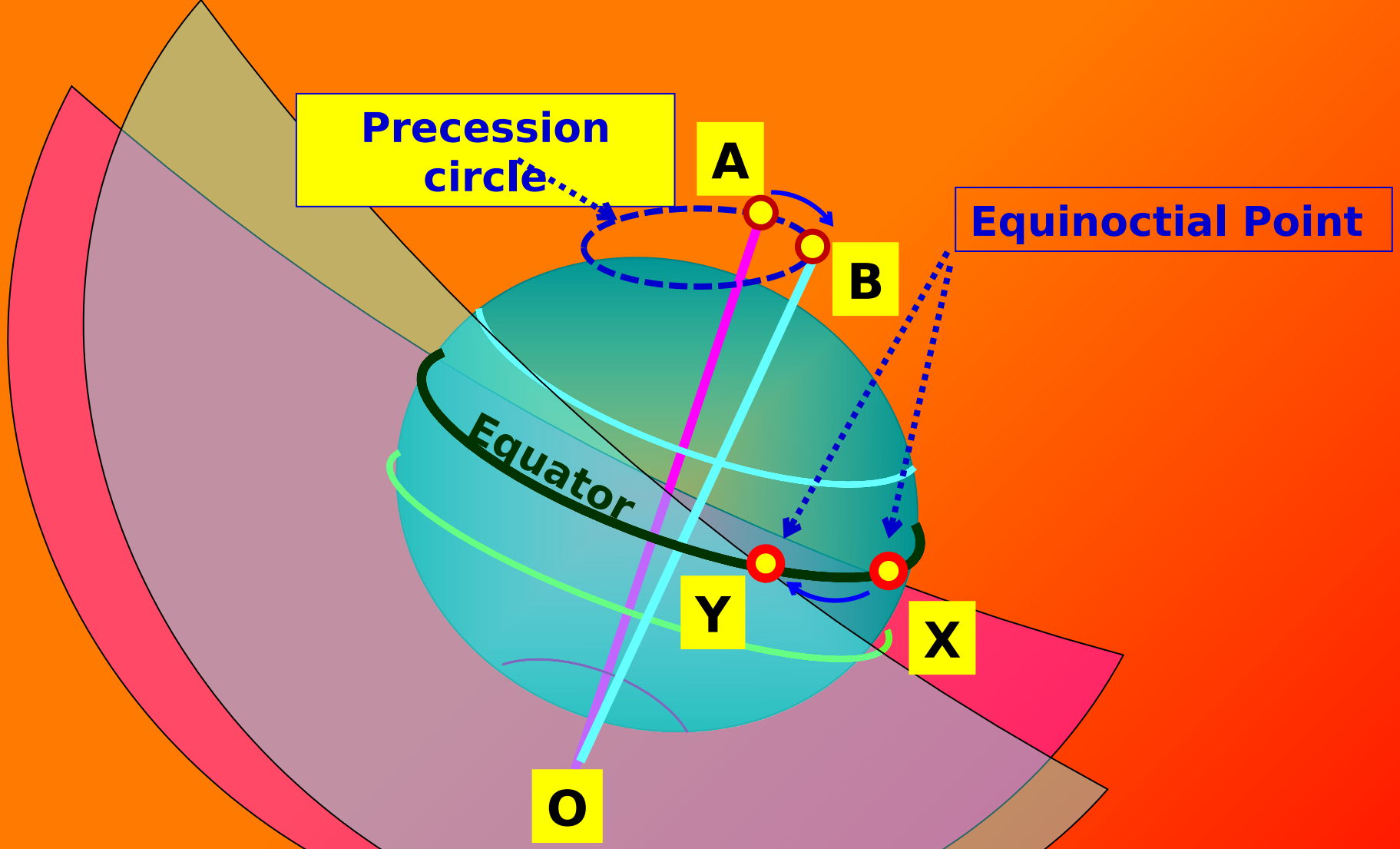
Axial Precession:

Reality or Misconception

Question 1 to 5 addressed in this part of presentation

Axial Precession

- Precession of equinoxes or earth's axial precession is westward shifting of equinoctial point
- Axis of the earth traces out clockwise circle with respect to the fixed stars



When the axis moves clockwise from position “A” to “B” point of intersection of equatorial plane and ecliptic plane (Equinoctial Point) will shift from “X” to “Y”

Earth’s axial precession and clockwise shift of the point of intersection of equatorial plane and ecliptic plane

Razzaq

Mathematics of Axial Precession and its Implications

Basic mathematics of precessing axis is never presented to validate the concept of axial precession

Basic mathematical analysis and implications of clockwise axial precession of the earth are provided first time in this book to elucidate the reality of this astronomical phenomenon.

Assumption:

Axis of the earth describes clockwise circular motion

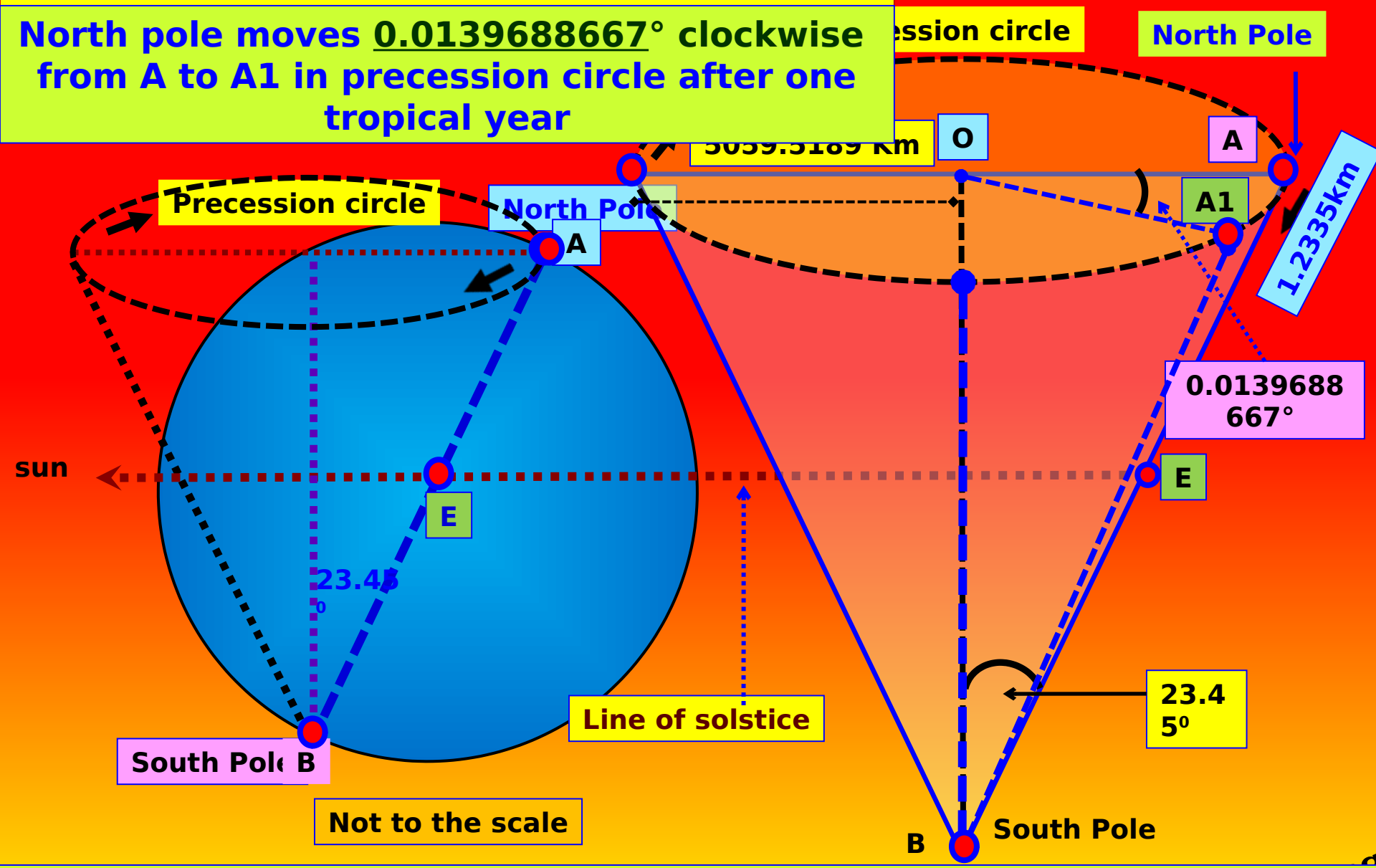
Axial precession occurs at the rate of 50.28792 arc-seconds or 0.0139688667°/annum and creates difference between sidereal and tropicl years

1- North Pole traces out a precession circle; South Pole remains fixed

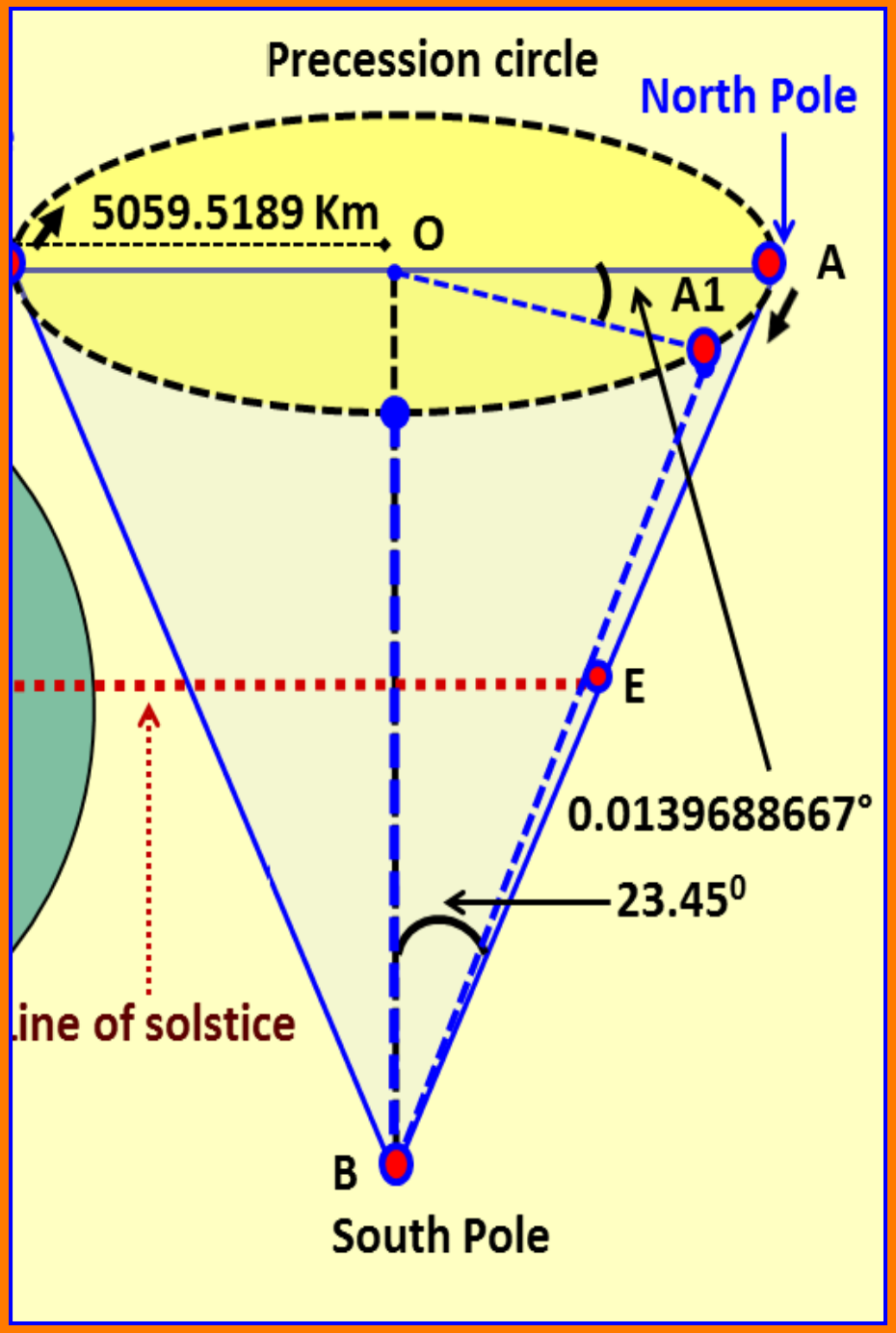
2- Both poles trace out precession circles while center of the axis remains immobile

1- Precession at North

North pole moves 0.0139688667° clockwise from A to A1 in precession circle after one tropical year



e precession circle is completed in about 25800 years



Radius of Precession circle

Polar diameter of the earth = 12714 km

Earth's Axis (AB) tilted 23.45°

From ΔABO

Sin 23.45° = perpendicular (AO) ÷ hypotenuse (AB)

AO (radius of precession circle) = Sin 23.45° X AB = 5059.5189 km

Displacement of north pole due to precession

Angle of precession (θ) = 0.0139688667° or 0.0002438027 radians

Clockwise circular displacement of NP (AA1) = rθ (0.0002438027 x 5059.5189) = 1.2335 km

NP will trace a circle of radius 5059.5189 km. After one tropical year it will be at position "A1" 1.2335 km away from its initial position. Thus, the NP will be drifting backward at the rate of 0.0139688667° per annum. This clockwise motion of the

2- Precession at both Poles with

Both poles move clockwise in precession circles

Consider the triangle AEO

AO = Sin 23.45° X AE

= 2529.7594 km

AO = Radius of precession circle

Yearly precession (θ) = 0.0139688667°

or

0.0002438027 radians

"S" Clockwise circular displacement of NP

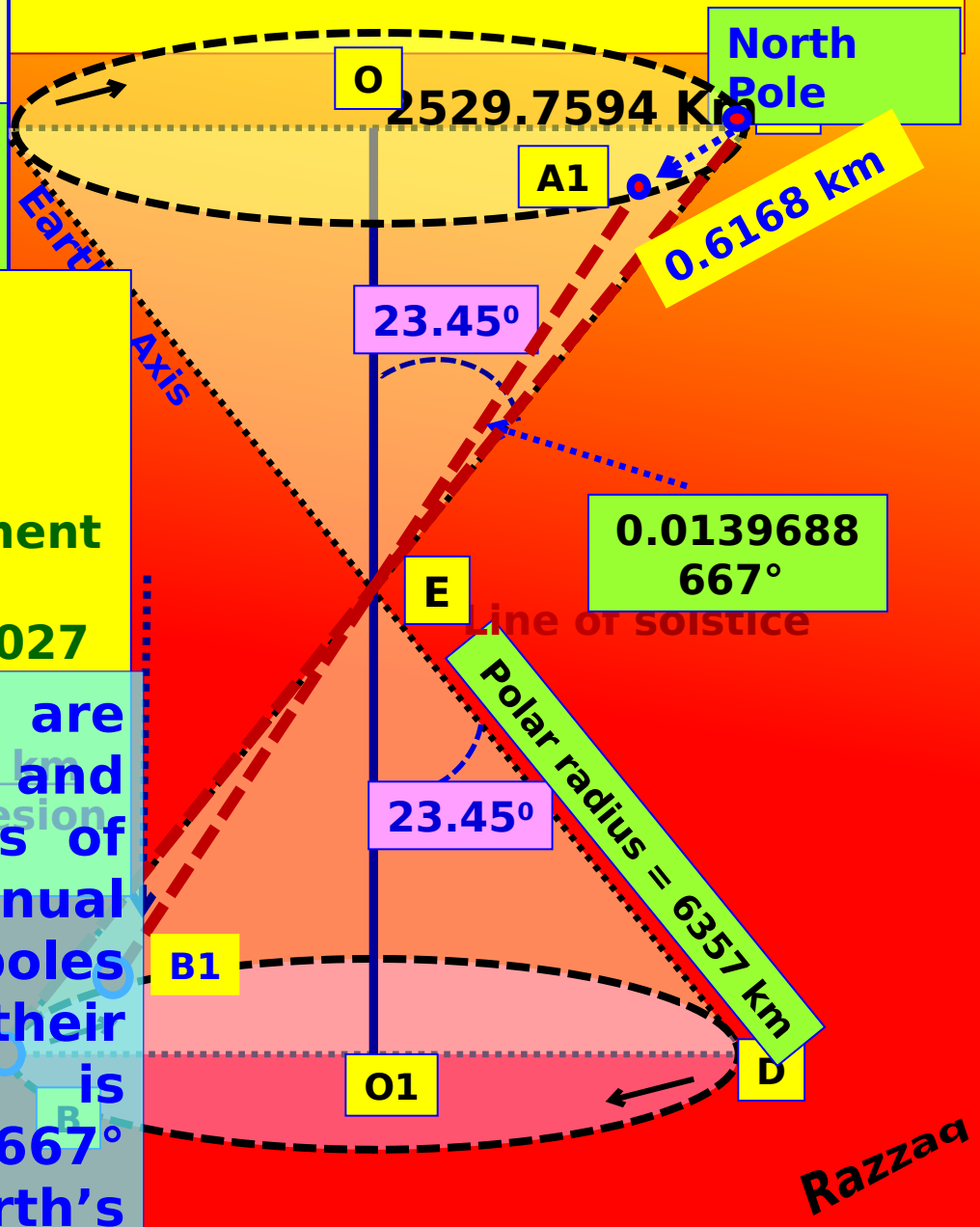
S = rθ = 2529.7594 x 0.0002438027

= 0.6168 km (A-A1)

North pole will be displaced 0.6168 km clockwise from A to A1 due to precession of 0.0139688667°

Triangles AEO and BEO1 are isosceles. So both north pole and south pole will trace circles of radius 2529.7594 km. Annual precession will displace the poles clockwise 0.6168 km from their initial positions. This is equivalent to 0.0139688667° clockwise precession of earth's

Not to the scale



Axial Precession & Revolution Period of Earth

- **Revolution period of earth**
- **Relative to the sun = 31556925.25**
  = (365.242190393519 d)

Tropical Year : the time between successive passages of the sun through same point on the ecliptic or "the interval between successive occurrences of vernal (or autumnal) equinox or between successive winter (or summer) solstice"

- **Relative to the stars = 31558149.76 s**
  = 365.256362962963 d

Sidereal Year: "time required for the earth to complete an orbit of the sun relative to the stars or the time in which the earth, the sun and the star align again"

Sidereal Y = 31558149.76 s

Tropical Y = 31556925.25 s

The earth takes 1224.51 sec (about 20 minutes) more to align with the reference star again

Question

What is true revolution period of the earth
(time the earth takes to complete 360° revolution around the sun)?
Tropical Year or Sidereal Year!

No clear answer in literature

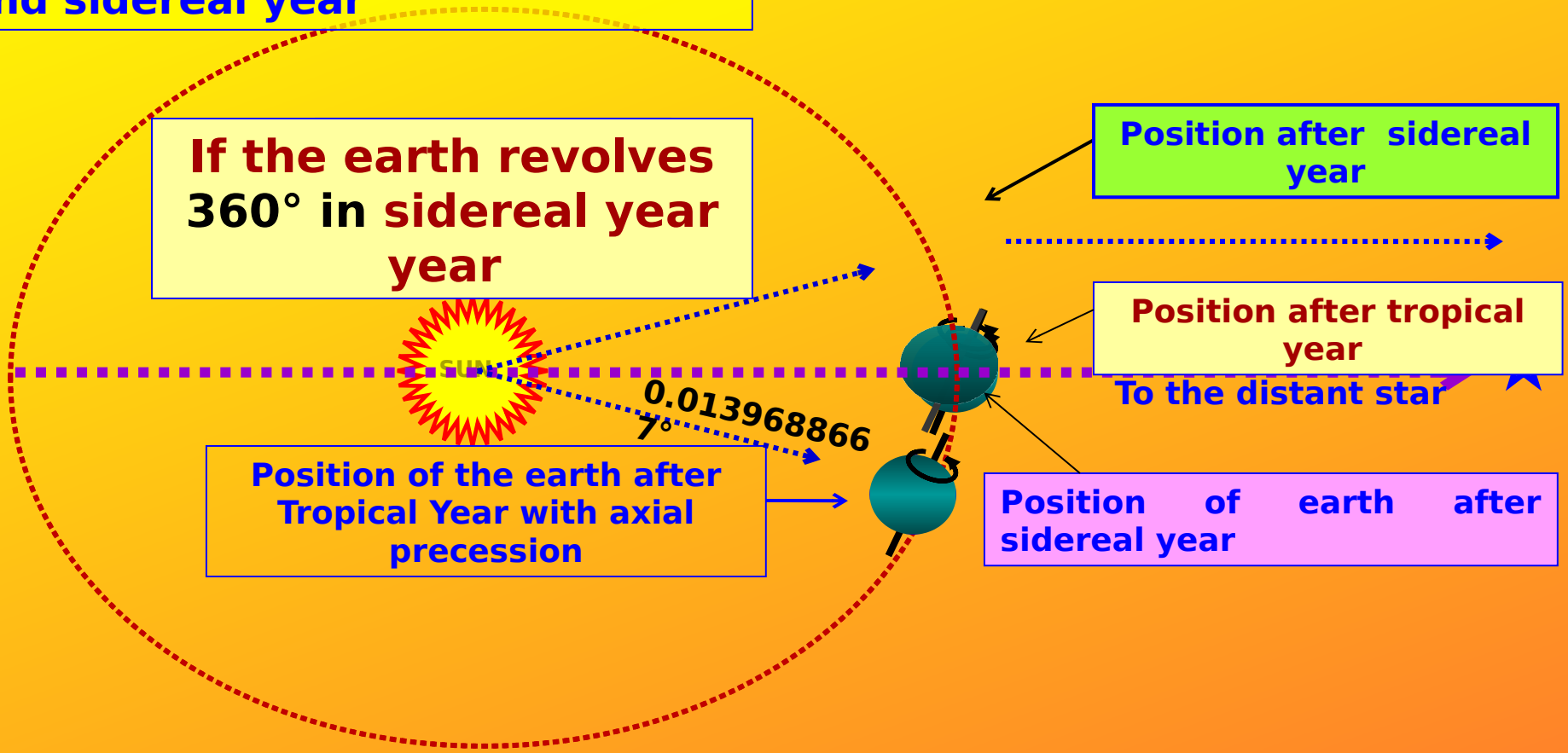
The earth revolves 360° in Tropical Year (Rowman & Littlefield, 2010; Roger Fenn, 2012)

Earth's axial precession is considered responsible for 1224.51 sec difference (Capderou, 2005; Yang, 2007).

In the absence of axial precession tropical and sidereal years would be identical (Kelley & Milone, 2011).

The earth travels little less than 360° in Tropical Year due to axial precession whereas it makes one complete revolution (360°) in Sidereal Year (Punmia et al., 2005; Seethaler, 2011).

Positions of the earth after completing revolution in tropical and sidereal year


If the earth revolves 360° in sidereal year year
SUN
0.013968866°
Position of the earth after Tropical Year with axial precession
Position after sidereal year
Position after tropical year
To the distant star
Position of earth after sidereal year

Consequently, Sidereal Year should be the true period for 360° revolution of the earth

Razzaq

Position of the earth and the observer

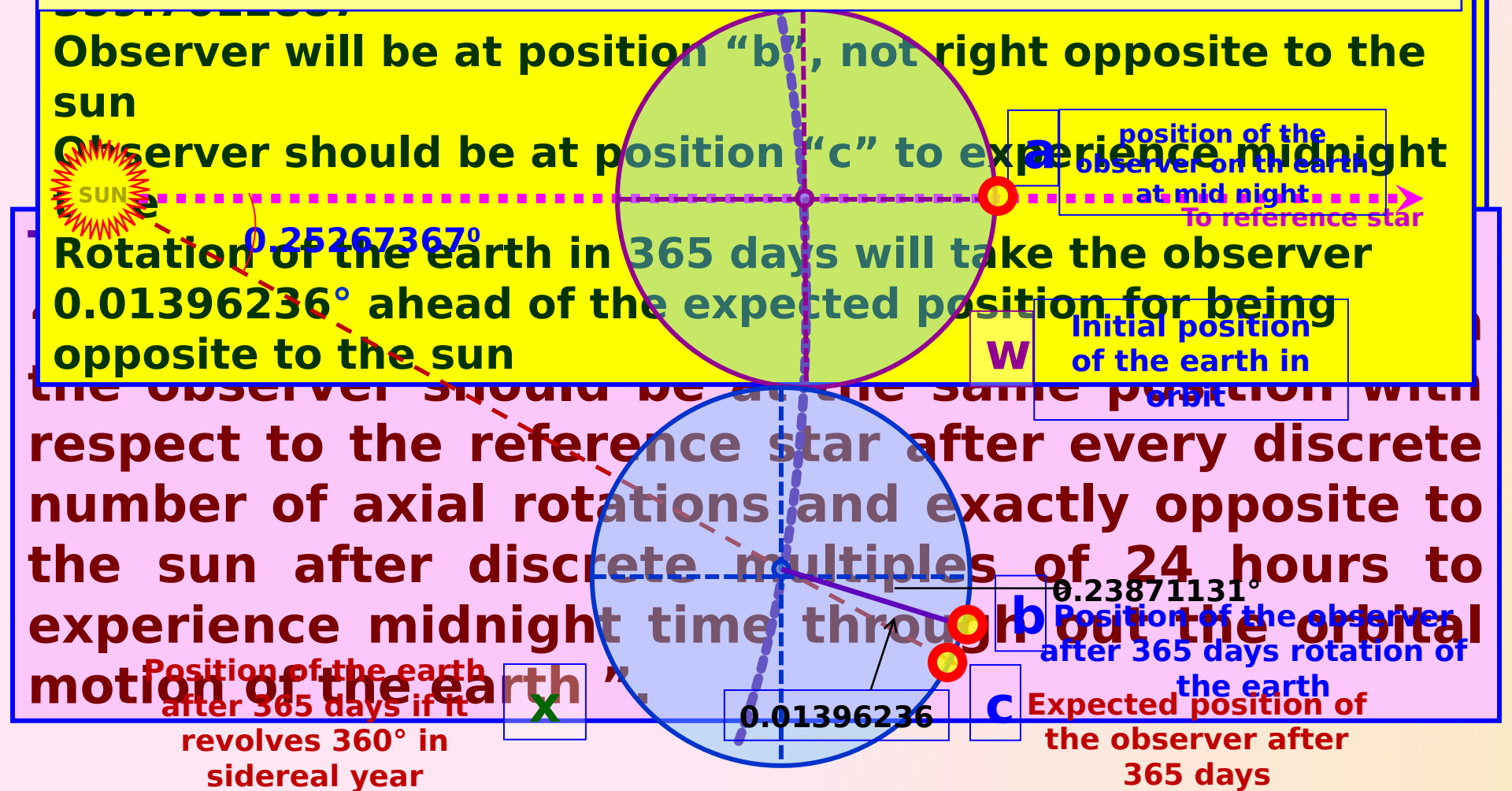
The observer will not be right opposite to the sun to experience midnight time if the earth revolves 360° in sidereal year - contrary to the hypothesis. Whereas observer actually experiences midnight time after every discrete number of days. Consequently sidereal year is not true period for 360° revolution of the earth.

Observer will be at position “b”, not right opposite to the sun

Observer should be at position “c” to experience midnight

Rotation of the earth in 365 days will take the observer 0.0139623 6° ahead of the expected position for being opposite to the sun

the observer should be at the same position with respect to the reference star after every discrete number of axial rotations and exactly opposite to the sun after discrete multiples of 24 hours to experience midnight time through out the orbital motion of the earth ”.


SUN
0.25267367°
position of the observer on the earth at mid night
To reference star
W
Initial position of the earth in orbit
0.23871131°
b
Position of the observer after 365 days rotation of the earth
Position of the earth after 365 days if it revolves 360° in sidereal year
X
0.01396236
C
Expected position of the observer after 365 days

However. the earth will not be in line with the sun and reference star after tropical year with 360° revolution

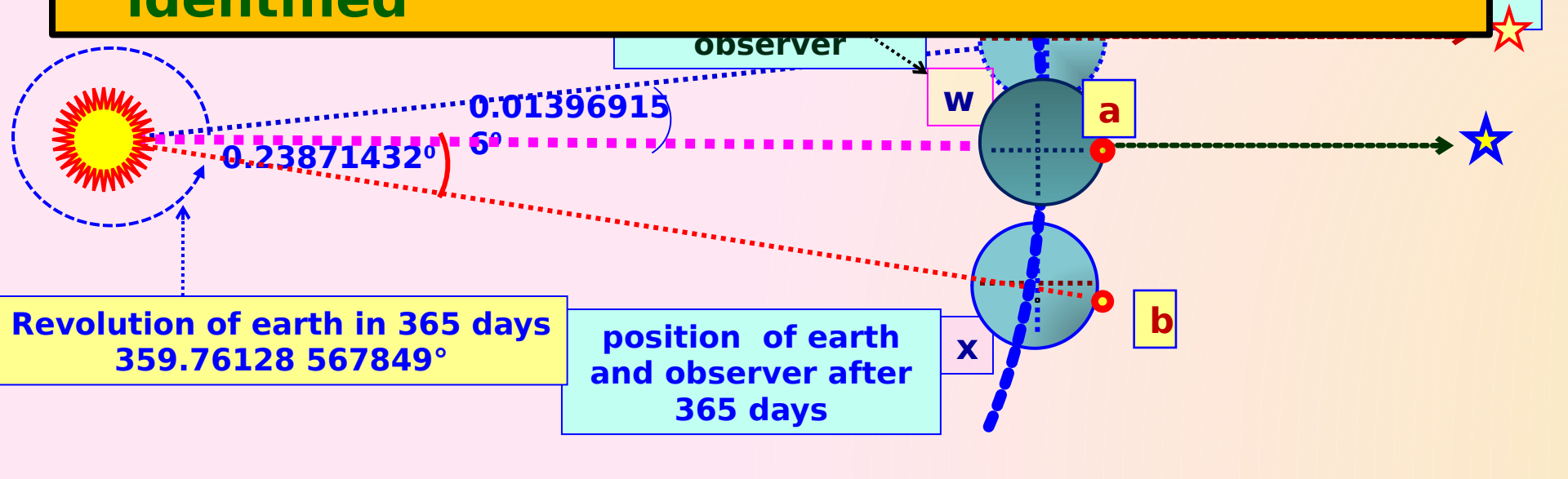
Earth needs to revolve 0.013969155629 more for alignment of

earth-sun-star in SY

CONCLUSION

1- Tropical or Sidereal period cannot mathematical validate the established realities

2- There is some missing link that needs to be identified



Inferences

- Observed facts do not mathematically and logically conform to sidereal year or tropical year for 360° revolution of the earth in heliocentric model
- If sidereal year is not the true period of revolution of the earth then the theory of precession of equinoxes shall stand invalid
- Concept of earth's axial precession cannot be rationalized mathematically
- Validity of earth's axial precession and orbital revolution of the earth around the sun becomes doubtful

Mathematical implications of axial precession

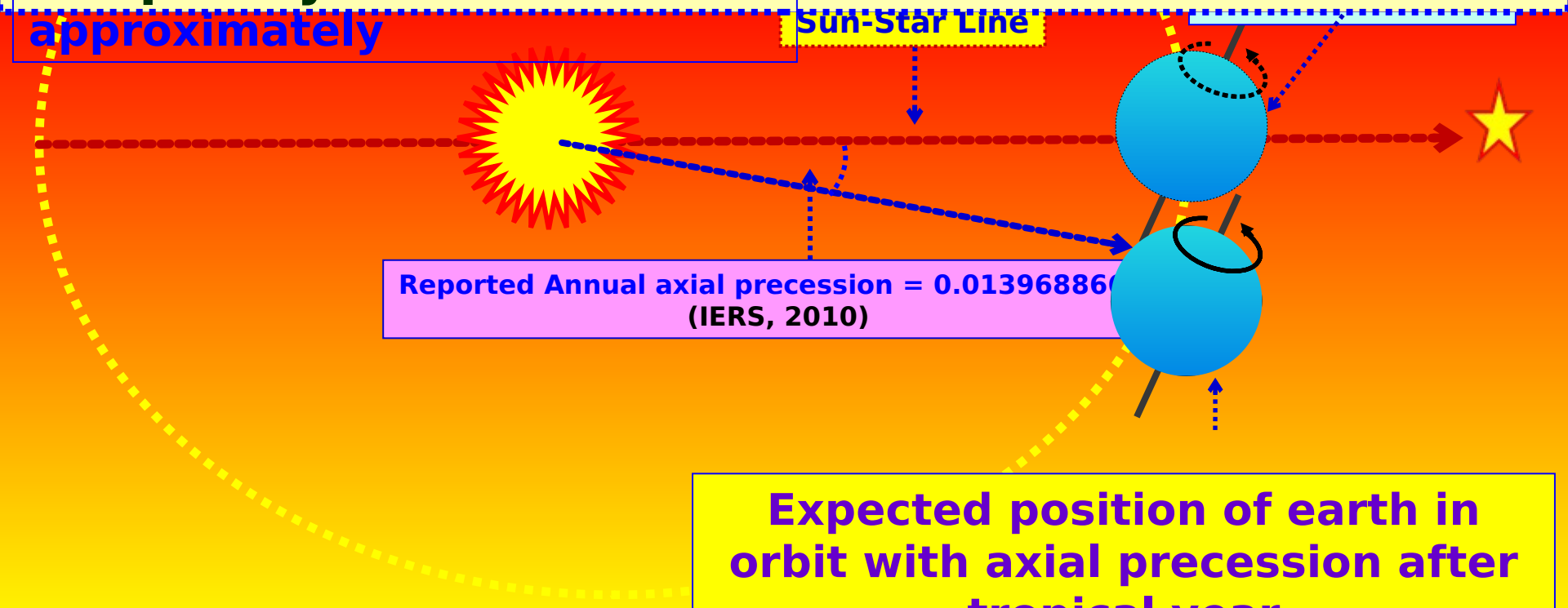
Then it may be Hypothesized

The earth, due to axial precession after tropical period of revolution, should be at a point in the orbit from where it will take 1224.51 seconds (about 20 min) more to come on the line joining the sun and the reference star (sun-star line) so as to complete revolution (360°) in sidereal period".

So, the earth needs to revolve 0.013968667° in orbit to be at same position on sun-star line approximately

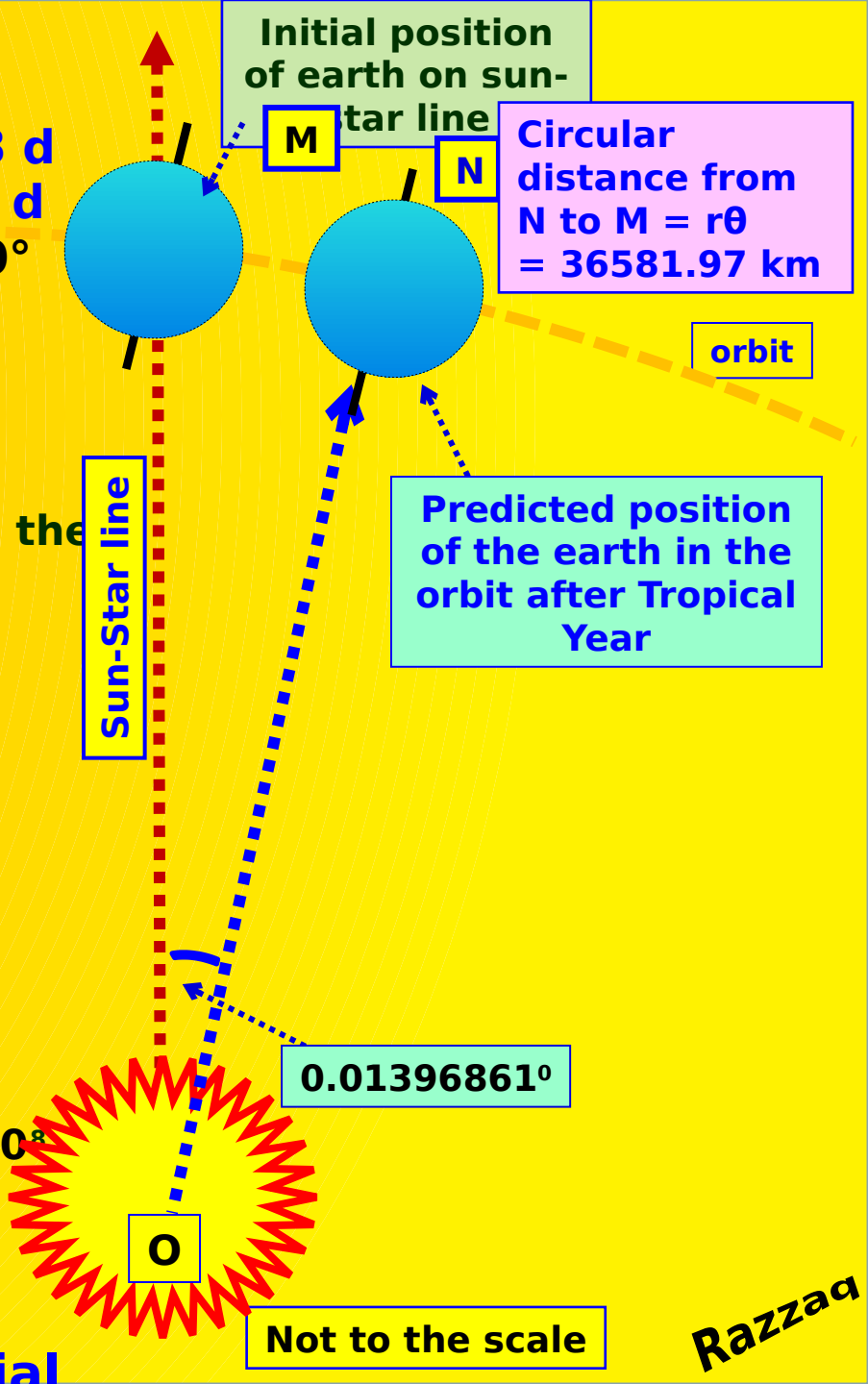
(Punmia et al., 2005; Seethaler, 2011).

- **Sidereal year is 1224.51 seconds longer than tropical year ≈ 20 minutes**


Sun-Star Line
Reported Annual axial precession = 0.01396886
(IERS, 2010)
Expected position of earth in orbit with axial precession after

Testing the hypothesis

Sidereal Period = 365.256362962963 d
Tropical Period = 365.242190393519 d
Revolution of the earth in SidP = 360°
Revolution of the earth in TroP = {(360 ÷ 365.256362962963) x 365.242190393519}
= 359.98603139°
Additional revolution needed to complete the orbit
= 360 - 359.98603139 = 0.01396861°
in 1224.51s (about 20 min)
(365.256363/360 x 0.01396861)
MO = 1.5 x 10^8 km (distance of the earth from sun)
Angle MON = 0.0139686136° (annual precession) (0.0002438798 radians)
Circular distance from M to N = rθ = 36581.97 km
θ = 0.0002438798 radians and r = 1.5 x 10^8 km
Consequently, the earth, with annual precession, should lag behind 36581.97 km from its initial


Initial position of earth on sun-star line
M
N
Circular distance from N to M = rθ = 36581.97 km
orbit
Sun-Star line
Predicted position of the earth in the orbit after Tropical Year
0.01396861⁰
O
Not to the scale

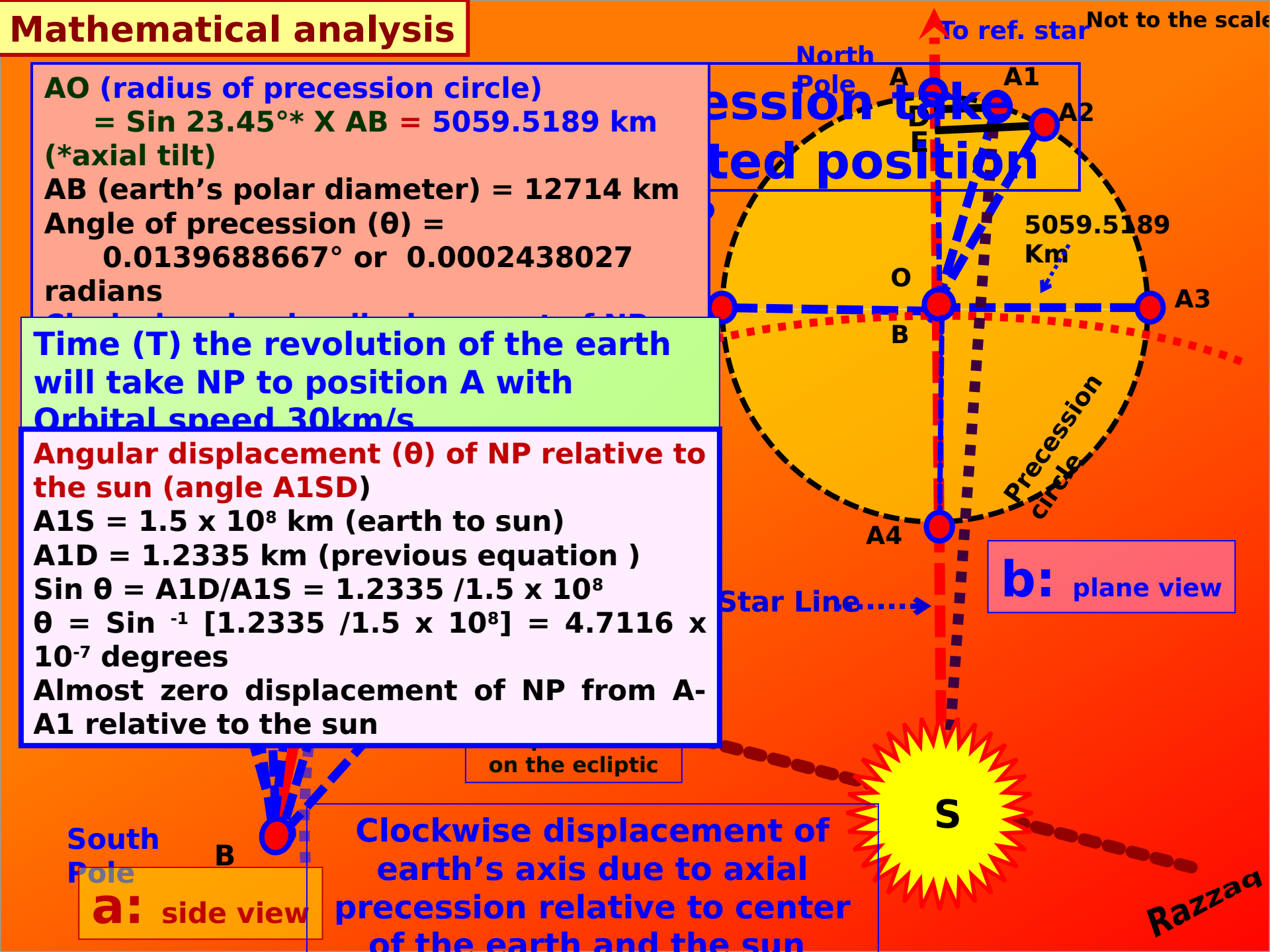
Razzaq

Mathematical analysis

AO (radius of precession circle)
= Sin 23.45°* X AB = 5059.5189 km
(*axial tilt)
AB (earth's polar diameter) = 12714 km
Angle of precession (θ) =
0.0139688667° or 0.0002438027 radians

Time (T) the revolution of the earth will take NP to position A with Orbital speed 30km/s

Angular displacement (θ) of NP relative to the sun (angle A1SD)
A1S = 1.5 x 10^8 km (earth to sun)
A1D = 1.2335 km (previous equation)
Sin θ = A1D/A1S = 1.2335 /1.5 x 10^8
θ = Sin $^{-1}$ [1.2335 /1.5 x 10^8] = 4.7116 x 10^{-7} degrees
Almost zero displacement of NP from A-A1 relative to the sun



INFERENCE

No pos… …h to lag behind by 36581.97km from its original position due to annual axial precession

Axial precession

- **cannot take the earth to the predicted position in orbit**
- **cannot be validated logically and mathematically**
- **concept of precession is beyond imagination and mathematically incomprehensible assumption**

Axial precession and length of sidereal Year

Sidereal period of revolution (SPR)

= 365d 6h 9min 9.76s (31558149.76 s)

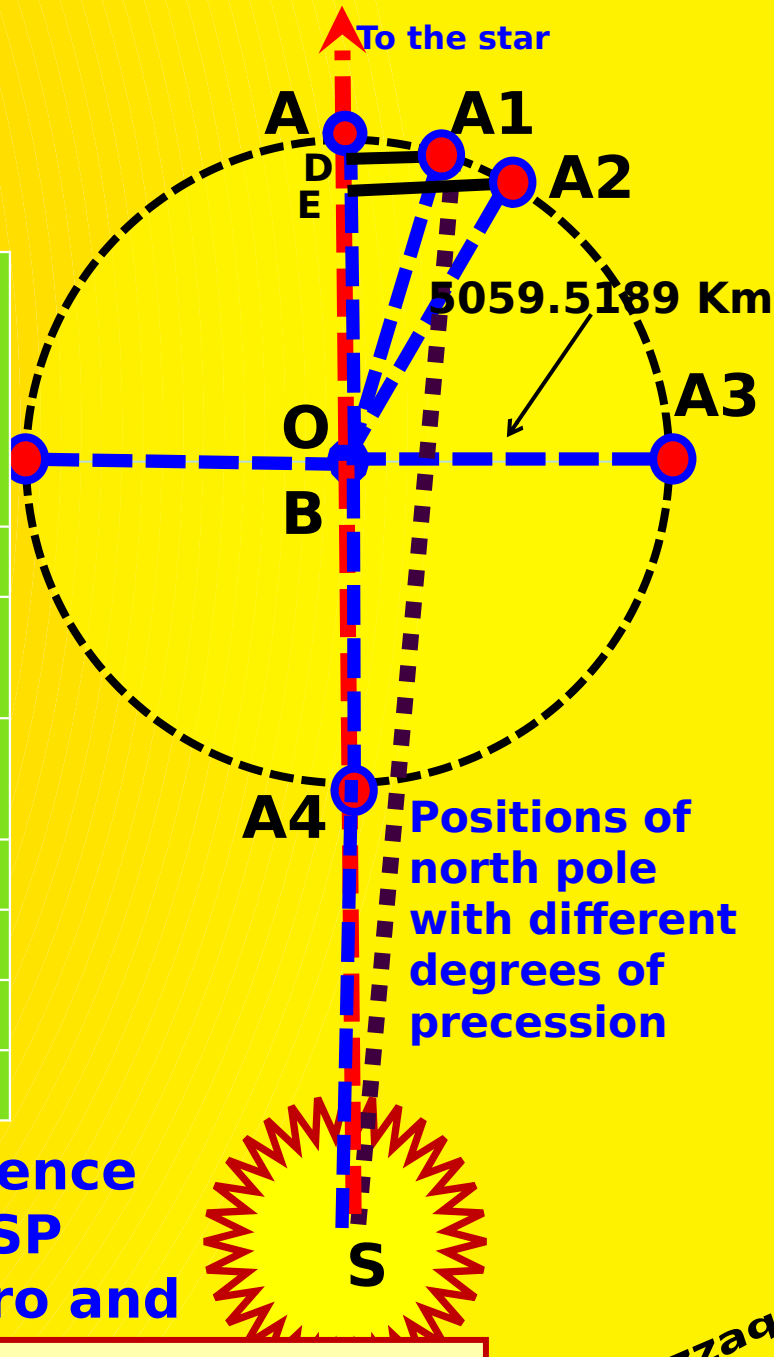
Hypothesis: 365.25362962963 d

“Axial precession must correspond mathematically to same length of SPR at both poles of the earth”

Mathematical analysis for same length of Sidereal Year at both poles of the earth

Axis moves from A to A1, A2, A3, A4, A5 and back to A due to precession

Precession ° (position of NP)	Displacement of NP from sun-star line (km)	More time req. for NP to reach its original position
0.0 ° (A)	0	0
0.01396886° (A1)	1.2335	+0.0411s
0.02793722°(A2)	2.4670	+0.0822s
90° (A3)	5059.5189	+168.6512s
180° (A4)	0	0
270° (A5)	5059.5189	-168.65121s
360° (A)	0	0



Axial precession must produce difference between sidereal periods at NP and SP continuously fluctuating between zero and ±168.6

Axial precession and length of sidereal year at the poles

Razzaq

- Precession was discovered in 2nd century BC, about 2200 years ago.
- If axial precession started in 2nd century BC then difference of more than 90 seconds (0.041116 x 2200) might be observed presently between the lengths of sidereal year at North Pole and South Pole
- However, discrepancy between lengths of sidereal year for North Pole and South Pole is never detected and reported
- Same length of sidereal year has been reported since 1812

Axial Precession & Concept of Sidereal Year

Sidereal year is the time that elapses between the instant when earth's center crosses the straight line passing from the center of the sun to a distant star (sun-star line) and the next instant when earth's center crosses the line (Anthony, 2012; Silen, 2010) i.e. alignment of the earth relative the stars will be same

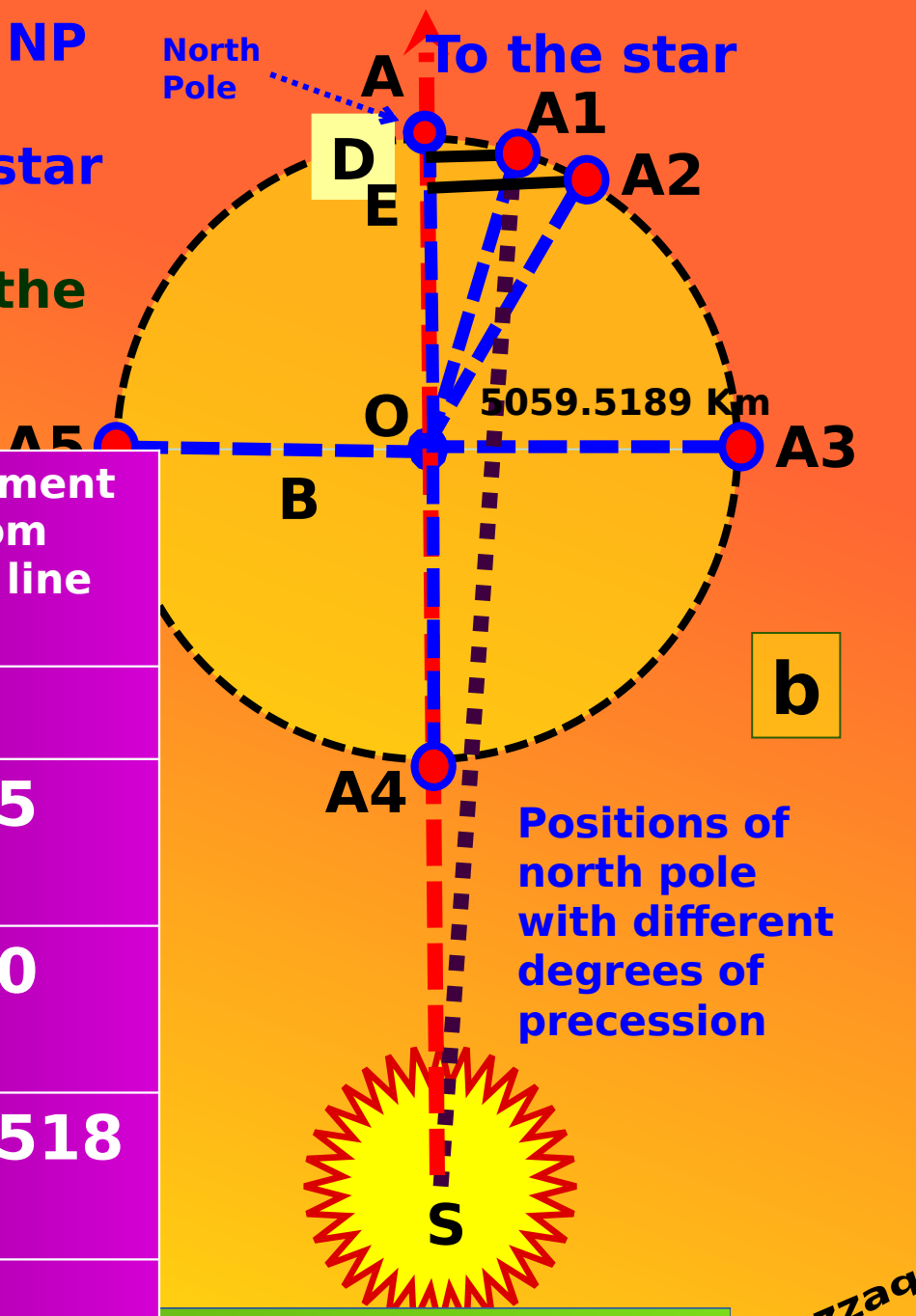
Hypothesis:

"After every sidereal period of revolution axis of the earth should return to its original position on the straight line passing from the center of the sun to a distant star to justify the concept of sidereal year".

At positions A1, A2, A3 and A5, NP will be 1.2345, 2.4670, 5059.5189km away from sun-star line

Earth's axis does not return to the same position after sidereal period conflicting with the

Precession °	Position of Axis	Displacement of NP from sun-star line (km)
0.0 °	A – B	0
0.0139688 6°	A1 – B	1.2335
0.0279377 3°	A2 – B	2.4670
90°	A3 – B	5059.518 9
180°	A4 – B	0
270°	A5 – B	5059.518



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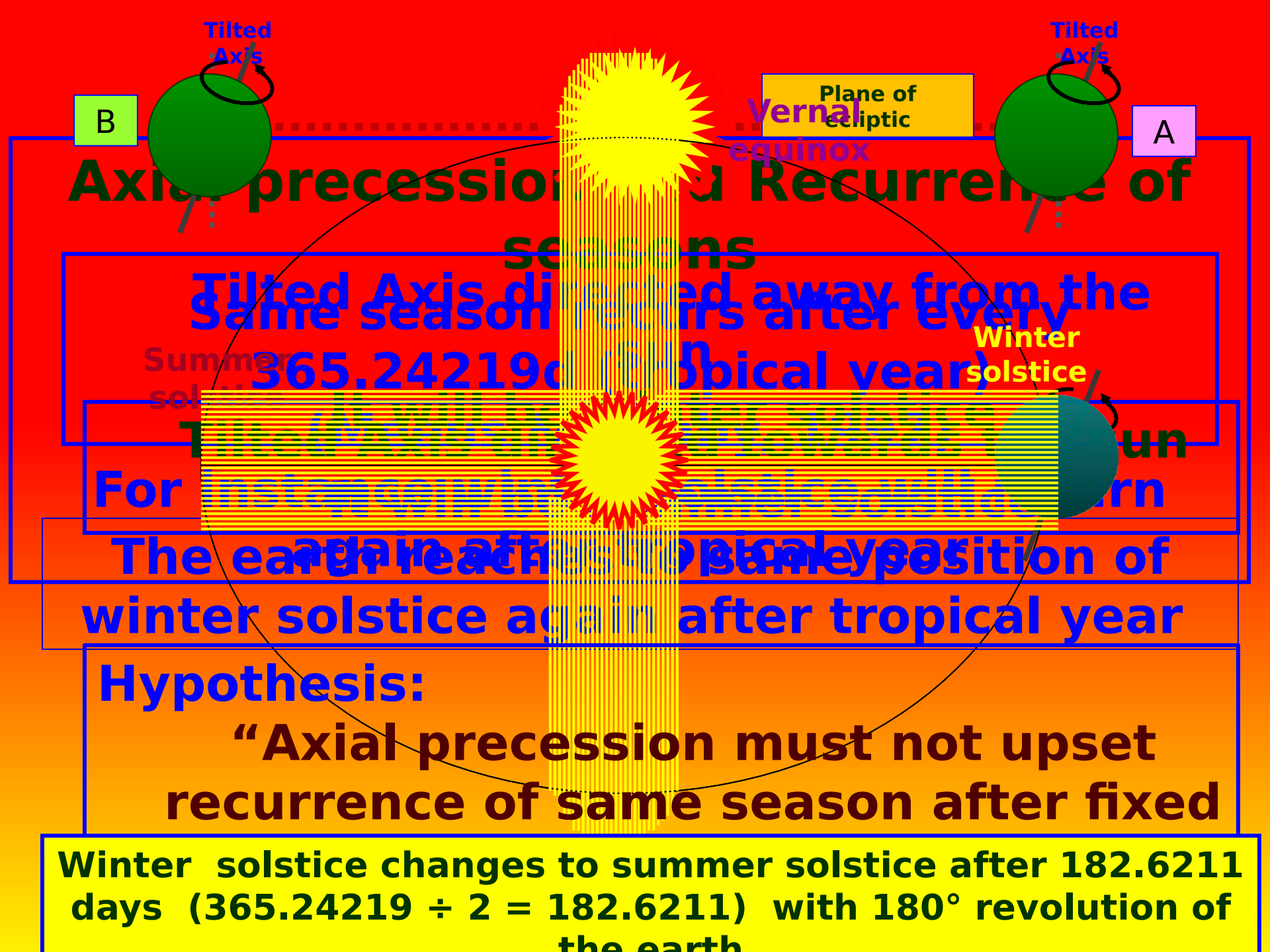


Axial precession and Recurrence of seasons

Tilted Axis directed away from the Same season recurs after every 365.24219 days (tropical year)

The earth reaches the same position of winter solstice again after tropical year

Hypothesis:

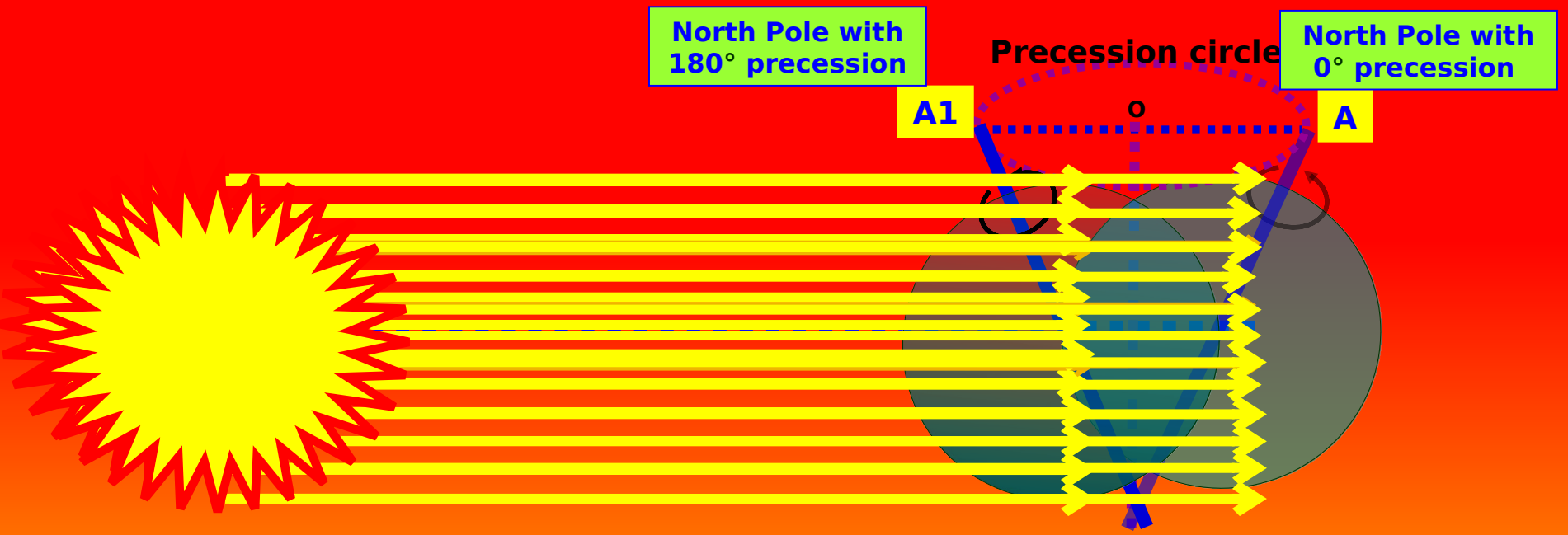
“Axial precession must not upset recurrence of same season after fixed

Winter solstice changes to summer solstice after 182.6211 days (365.24219 ÷ 2 = 182.6211) with 180° revolution of the earth

Axial precession and orientation of north pole of the earth

0.01396886°per annum

Orientation of north pole with 0° and 180° precession



North Pole with 0° precession is oriented away from the sun: it will be winter solstice (position A)

North pole with 180° precession will be oriented towards the sun and it will be summer solstice (position A1)

Razzaq

- Revolution of 180° in the orbit for 182.6211d takes the earth from winter solstice to summer solstice;
  (North pole oriented away from the sun)
- Equivalent seasonal change should also be induced by precession of 180°; (North pole

- winter solstice should completely change into summer solstice with axial precession of 180°

- Seasonal change induced by precession of:
  180° precession is equivalent to 182.6211d
  (north pole oriented away from the sun)
  90° is equivalent to 91.31055 d
  0.0139688667° is equivalent to 0.014172 d
  (1224.4847s)

- axial precession of 0.01396861° after every tropical year must delay recurrence of winter/summer solstice by 1224.4622 seconds

Consequently

"If axial precession is reality then it must delay recurrence of winter or summer solstice, vernal or a

Suppose the earth was at winter solstice in the year 1810.

In 2010 the expected change in occurrence of winter solstice is calculated below:

- **Interval from 1810 to 2010 = 200 years**
- **Axial precession/yr = 0.0139688667°**
- **Precession in 200 yr = 0.0139688667° x 200 = 2.79377334°**
- **Delay in the recurrence of winter solstice =**

Expected delay in recurrence of winter solstice after 200 yr = more than 68

- **No delay in recurrence of winter solstice has been reported during the last two centuries**
- **Almost same length of tropical year was reported in 1797 (Vince, 1797), 1838 (Kerigan, 1838), 1997 (Meeus & Danby, 1997) and 2012**

Inference: Axial precession, if reality, must delay recurrence of seasons

However, no delay in recurrence of seasons (summer/winter solstice or vernal/autumnal equinox) is ever observed and reported

Concept of axial precession cannot be substantiated mathematically and becomes doubtful

Axial precession and drifting of Polaris

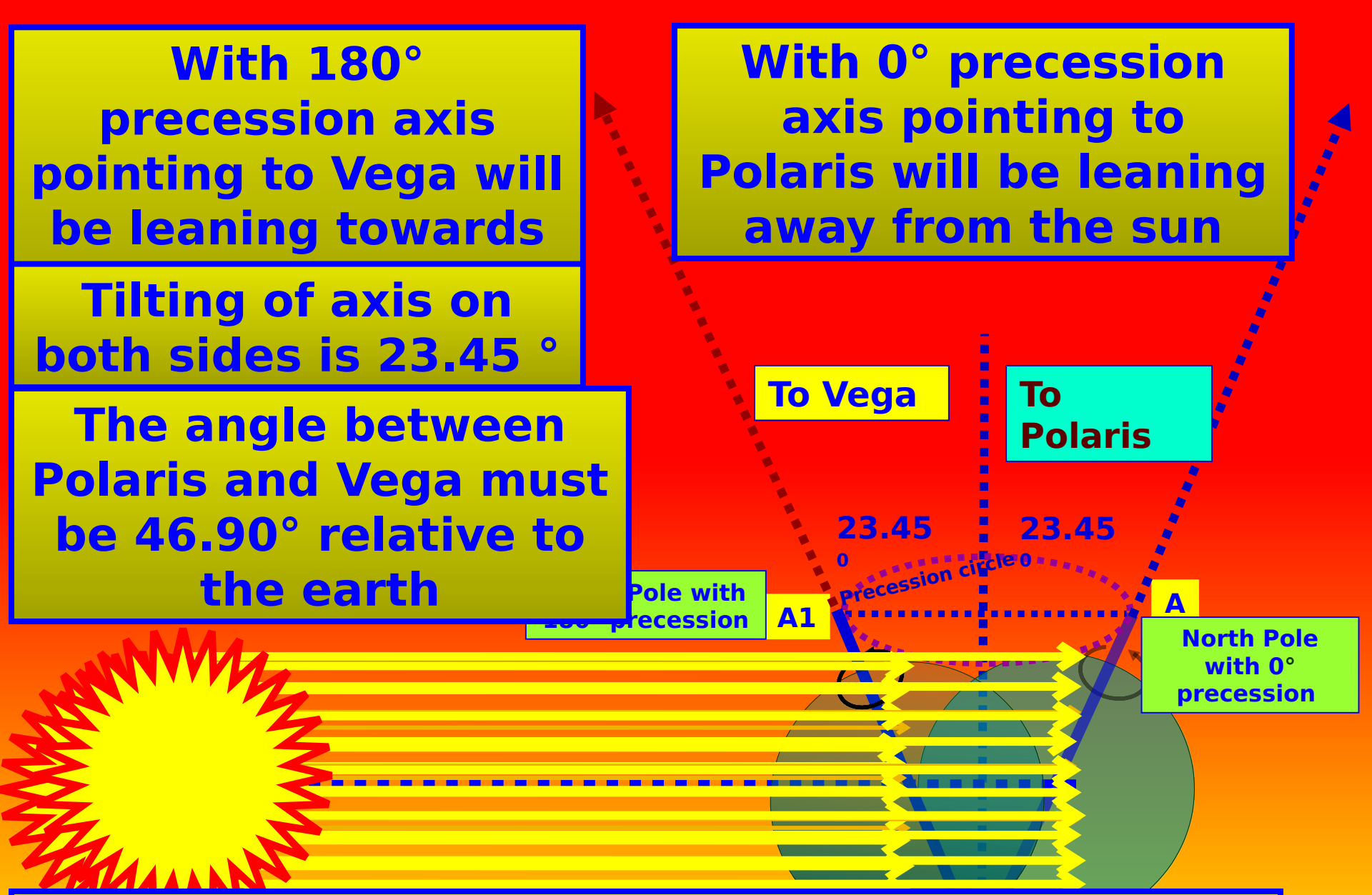
- One consequence of precession is that the North Star Polaris is drifting. Vega will be north star for a time in the distant future (Lang, 2013).
- Polaris and Vega alternate as North Star every 13000 years (Walker & Wood, 2010)

With 180° precession axis pointing to Vega will be leaning towards

With 0° precession axis pointing to Polaris will be leaning away from the sun

Tilting of axis on both sides is 23.45 °

The angle between Polaris and Vega must be 46.90° relative to the earth



However, angle between Polaris and Vega with respect to the earth is very very small; less

Razzaq

Summary

on necessitates sidereal year to be the true revolution period but it cannot mathematically validate same position of the

Axial precession cannot justify mathematically the difference of 1224.51s between sidereal and

Axial precession cannot elucidate mathematically the anticipated position of the

Same length of sidereal year at both poles cannot be substantiated mathematically with

Notion of axial precession does not conform to the established concept of sidereal year

Recurrence of winter/summer solstice after fixed interval does not conform to mathematical implication of axial precession

Drifting of Polaris as a consequence of axial precession is not in agreement with the angle

Conclusion

Concept of axial precession is surely a misconception and needs to be rectified

Notion of axial precession lacks mathematical substantiation and is based on misapprehension of solar system

A certain link is missing definitely in understanding the solar system that is further confused with the assumption of axial precession

Precisely determined numerical values for tropical and sidereal periods of revolution by voluminous efforts of distinguished scientists need appropriate implications

Real phenomenon causing the sun to rise in new constellation each year and mathematical evidence for 1224.51 seconds difference between the lengths of sidereal and tropical years for which concept of axial precession was coined is

GOOD LUCK
ALLAH BLESS YOU ALL

Please send your questions or any query

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